

# Concept for Perpetual Transit Optical Random Access Memory (PTO-RAM)

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Simon Edwards

Research Acceleration Initiative

Note: This article is a re-write and the original date of publication is approximate. During a data migration, this publication was somehow not imported, although I remember writing it and alluded to it in subsequent papers. Some of my publications do not have the sequential numbers I have affixed to most, which I now do by custom. I estimate the placement of this publication as #336 in the sequence. Noted 30 December 2025.

## **Introduction**

A novel type of Random Access Memory is needed to support future computing applications which allows for greater speed and storage density. Miniaturized precision timing makes possible a new approach described herewith.

## **Abstract**

I propose that a type of optical carousel or a series of such carousels be used in order to temporarily store large quantities of data in circuitous optical fibers. Precision timing may be used in order to link memory index positions to the time at which light waves injected into the fiber can be expected to come around again on the carousel. When data needs to be retrieved, a switch is activated which causes the light to be directly accessed within a purely optical computer system or converted back into electrons in a hybrid optical-electronic system. Our displays are still electronic, so ultimately, there is some conversion necessary at some point.

## **Conclusion**

This system is substantially different from previous systems of Random Access Memory. Rather than storing information in specific voltage cells which have fixed physical locations, data is stored in a cyclical loop, constantly in transit, and knowledge of how to retrieve it depends upon knowing the time when it is due to come around again to the reader mechanism.